REMARKS

A.   Interview Summary

Applicant thanks Examiner Muriel Tinkler and Supervisory Patent Examiner Alexander Kalinowski for the courtesy extended to Applicant and his representatives during an on-site interview at the USPTO on April 21, 2009.   During the interview, Applicant gave a presentation that provided general background information concerning options and option spreads.   Applicants also discussed the advantages of the presently claimed invention and provided a demonstration of the invention.   Applicant's representatives discussed the pending claim rejections under 35 U.S.C. §§101, 112, and 102 and explored possible claim amendments with Examiner Tinkler.

B.   Status of the Claims

Prior to the submission of this paper, claims 1-35 were pending and under examination.   In this paper, Applicants have cancelled claims 33-35 without prejudice or disclaimer and have added new claims 36-68.   When these claim cancellations and additions have been entered, the claims under examination will be claims 1-32 and 36-68.

Claims 1, 12, 20, and 23 are rejected under 35 U.S.C. §112, ¶1, for allegedly failing to meet the enablement requirement.

Claim 23 is rejected under 35 U.S.C. §112, ¶1 for allegedly containing new matter.

Claims 2, 6, 7, 13, 16, 17, 23, 25, 27, 28, 31, and 32 are rejected under 35 U.S.C. §112, ¶2 for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 2, 6, 7, 13, 16, 17, 27, 28, 31, and 32 are rejected under 35 U.S.C. §101 for allegedly defining a process improperly by failing to set forth any steps involved in the process.

Claim 35 is rejected under 35 U.S.C. §101 for allegedly being directed to non-statutory subject matter.

Claims 1-35 are rejected under 35 U.S.C. §102(b) for allegedly being anticipated by U.S. Pre-Grant Publication No. 2002/0147670 to Lange ("Lange").

C.   Claim Amendments

Claims 1, 12, 20, and 23 have been amended to remove the phrase "free of buy/sell indicators" and related phrases, as this previously added language did not result in the allowance of the case. In making these amendments, Applicant does not concede that the new matter rejections that were set forth in the Office Action are proper. Applicant hereby reserves the right to reintroduce such language if deemed appropriate in a later stage of prosecution.

Claim 4 has been amended to correct a drafting error. The claim now recites, *inter alia*, that "the vega indicates price sensitivity to changes in expected volatility." Support for this amendment is found generally throughout the original specification as filed [e.g, see original specification, page 10, lines 10-11].

Claims 11, 18, and 19 have been amended to recite the Markush-group language "selected from the group consisting of". These amendments were made to put the claims in better form and were not made for any reasons related to patentability.

Claims 12 and 20 have been amended to reintroduce original claim language that was inadvertently altered during the preparation of the previous paper.

Claims 21 and 26 have been amended to add the phrase "and wherein" in order to improve the readability of these claims. These amendments were made to put the claims in better form and were not made for any reasons related to patentability.

Claim 23 has been amended to require the steps of "receiving a selection of a sequence of boxes, each selection in the sequence comprising optioncode, a contract, a strike, and a callput;" and "determining, for the selected sequence, a type of option spread, an option spread name, an option spread price, and a quantity for the option spread." Support for these amendments is generally found throughout the specification. [see, e.g., original specification, page 7, line 21 to page 8, line 5.]

Claim 25 has been amended to remove the word "calculated", thereby correcting a minor drafting error.

Claim 30 has been amended to recite the step of "recalculating at least one of a delta, gamma, vega, theta, and implied volatility". This amendment finds support in the originally filed version of claim 30, because the amendment makes explicit what was already implicit in the claim. As originally filed, claim 30 included the step of "receiving a recalculated at least one of a delta…", which indicates that a recalculation step was performed. Because the newly added claim language makes the recalculation step more explicit, no new matter has been added by this claim amendment.

Claims 33-35 have been cancelled without prejudice or disclaimer. Applicant hereby reserves the right to reintroduce the cancelled subject matter at a later stage of prosecution or to pursue the subject matter of these claims in a later filed continuation application.

Claims 2, 6, 8, 13, 16, 17, and 27 have been amended to specify that the valuation is a "current valuation". Support for this amendment is found in the originally filed specification, at page 10, lines 19-21. This passage states that "[t]he invention determines the…price…in real time", which indicates that the calculated valuation is the current valuation.

The preambles of all of the previously pending dependent claims have been amended to correct minor punctuation errors and to put the preambles in a format that is consistent with current U.S.P.T.O. practice.

New claims 36-67 are Beauregard-type claims that correspond to original claims 1-32. Thus, new claims 36-67 find support in original claims 1-32. Support is also found in the first paragraph of the section of the originally filed specification titled "Detailed Description of the Illustrative Embodiments". This paragraph discloses an embodiment where the software corresponding to the claimed method is stored on a computer, thereby providing support for the claimed "computer readable medium". This mention of a computer in this passage of the specification also provides support for new claim 68, a computer system claim that requires "a processor" and "computer readable medium". Applicant respectfully submits that no new matter has been added by these amendments.

D.   Rejections Under 35 U.S.C. §112, ¶1

1.   New Matter Rejections

The Office Action objects to the amendment filed on October 22, 2008 for allegedly introducing new matter. According to the Office Action, the following claim features are not supported by the originally filed specification: (1) "a first option" or a "second option" that is "free of buy/sell indicators"; (2) "accepting a selection of a sequence of boxes"; and (3)

"providing, for the selected sequence, a determined type of option spread." Without agreeing to the propriety of the rejection, Applicant respectfully asserts that the objection is moot in view of the claim amendments presented herein.

The Office Action also rejects claim 23 for containing the phrases "accepting a selection of" and "providing an option spread". Again, without agreeing to the propriety of the rejection, Applicant assert that this rejection of claim 23 is moot in view of the amendments presented herein.

Applicant respectfully requests reconsideration and withdrawal of these grounds of rejection under 35 U.S.C. §112, ¶1.

2.   Enablement Rejection

The Office Action rejects claims 1, 12, 20, and 23 for allegedly failing to meet the enablement requirement of 35 U.S.C. §112, ¶1. According to the Office Action, "[a] first and second option 'free of buy/sell indicators' is critical or essential to practice the invention, but is…not enabled by the disclosure". [Office Action, page 3, ¶4].

Applicant respectfully traverses this rejection. As an initial matter, Applicant disagrees with the Office Action's characterization of the phrase "free of buy/sell indicators" as being critical to the practice of all embodiments of the invention. Applicant also disagrees with the Office Action's conclusion that the specification is non-enabling. However, in view of the fact that Applicant has amended the claims to remove the phrase "free of buy/sell indicators," this rejection is believed to be moot. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this ground of rejection under 35 U.S.C. §112, ¶1.

E.   Rejections Under 35 U.S.C. §112, ¶2

The Office Action rejects claims 2, 6, 7, 13, 16, 17, 23, 25, 27, 28, 31, and 32 for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. According to the Office Action, the claims "[provide] for the use of 'valuation' [sic], but since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced" [Office Action page 4, ¶8].

Applicant respectfully traverses this rejection, because it appears to be based upon a mischaracterization of the claims. The claims in question are not "use" claims that do not recite any active positive steps, despite the Office Action's statements to the contrary. In particular, Applicant notes that none of the claims even recite the word "use" or "using". Furthermore, claim 2 requires the active, positive step of "calculating a valuation for the option spread". Subsequent claims recite active steps that manipulate the valuation. For example, claim 6 requires the active step of "sending at least one of the quantity, valuation, name, delta, gamma, vega, theta, and implied volatility to a display device." Thus, Applicant's claims are not written as "use" claims. Compare Ex parte Erlich, 3 USPQ2d 1011 (Bd. Pat. App. & Inter. 1986) (holding that a claim that recited "[a] process for using monoclonal antibodies of claim 4 to isolate and purify human fibroblast interferon" was indefinite because it merely recited a use without any active, positive steps delimiting how this use is actually practiced.)

For similar reasons, the corresponding rejection of claims 2, 6, 7, 13, 16, 17, 27, 28, 31, and 32 under 35 U.S.C. §101 is improper and should be withdrawn. Again, this rejection is based upon a mischaracterization of Applicant's claims as lacking active process steps. All of

these claims recite active process steps, however. By way of example, claims 2 and 13 recite the active step of "calculating"; claims 6, 7, and 16 recite the active step of "sending"; claim 17 recites the active step of "displaying" and claim 27 recites the active step of "saving". Thus, Applicant respectfully requests reconsideration and withdrawal of this ground of rejection.

With respect to the Examiner's question concerning the timing of the valuation [see Office Action, page 4, ¶10], Applicant points out that claims 2, 6, 8, 13, 16, 16, and 27 have been amended to specify that the valuation is a "current valuation", as opposed to a future valuation. Furthermore, for the specific rejections of claims 23 and 25 under 35 U.S.C. §112, ¶2 [see Office Action, p. 5], Applicant respectfully contends that all of these rejections are moot in view of the amendments presented herein.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. §112, ¶2.

F.   Rejections Under 35 U.S.C. §101

Claim 35, which was directed to a "system for receiving at least one option spread" comprising, inter alia, "a memory" and a "processor" was rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. Because Applicants have requested the cancellation of claim 35, this rejection is moot. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this ground of rejection.

Furthermore, to the extent that the USPTO takes the position that all system claims are directed to non-statutory subject matter, Applicant respectfully disagrees, as such a position would contradict both U.S. Supreme Court precedent and the examination guidelines set forth in the MPEP [see MPEP §2106 and cases cited therein]. Applicant recognizes that one

may not patent a natural phenomenon, a law of nature, or an abstract idea. See, e.g., Diamond v. Diehr, 450 U.S. 175, 185, 209 USPQ 1, 7 (1981)]. In addition, one may not patent "every substantial practical application" of an abstract idea, because such a patent "in practical effect would be a patent on the [abstract idea] itself." Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972); cf. Diehr, 450 U.S. at 187, 209 USPQ at 8

Even in view of these restrictions, Applicant contends that claim 68, which is a computer system claim, is directed to patentable subject matter, because it does not fall within any of the judicially created categories of non-statutory subject matter. For instance, the computer system of claim 68 is not a "natural phenomenon" or a "law of nature". Moreover, the claimed computer system is not an "abstract idea" because (1) it recites tangible objects, including "a processor" and "a computer readable medium"; and (2) the claimed computer system receives input from another tangible device (viz., an "input device") as specified by the corresponding base claims (i.e., claims 36, 47, 55, and 58). The claimed computer system also does not represent an attempt to patent every "substantial practical application" of an abstract idea, because the claim is limited by certain physical requirements, such as the requirement for input from an "input device". For at least these reasons, Applicant maintains that claim 68 is directed to statutory subject matter and that a rejection of this claim under 35 U.S.C. §101 would not be proper.

G.   Rejections Under 35 U.S.C. §102

Applicants respectfully traverse the rejection of claims 1-35 under 35 U.S.C. §102(b) as allegedly being anticipated by Lange. Briefly, Lange fails to disclose all of the features of the claimed invention. Accordingly, the rejection should be withdrawn.

To maintain an anticipation rejection under 35 U.S.C. §102, the USPTO must show that *a single prior art reference discloses each and every element* of the claimed invention. See Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (stating that "[a] claim is anticipated <u>only if</u> each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (emphasis added)). Furthermore, not only must all of the elements be present, but they also must be arranged in the manner required by the claim. <u>In re Bond</u>, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Claim 1, as amended, recites the following:

1.   A method for determining a type of an option spread based upon options received from an input device, the method comprising the steps of
     (a) determining a first previous option count;
     (b) receiving a first option from an input device, the first option comprising an optioncode, a contract, a strike, and a callput;
     (c) assigning a quantity for the first option;
     (d) determining a second previous option count;
     (e) receiving a second option from an input device, the second option comprising an optioncode, a contract, a strike, and a callput;
     (f) comparing the second option to the first option;
     (g) assigning a quantity for at least one of the first option and the second option based upon the comparison of the second option to the first option; and,
     (h) determining a type of option spread based upon at least one of the first and second option counts, the comparison of the second option to the first option, and the assigned quantities of the first and second options.

According to the Office Action, claim 1 is anticipated by Lange, because Lange allegedly discloses "offering a digital option spread in paragraph 797; that option selling is common place and well known in the art in paragraph 803; and determining the type of option spread based on

comparing a first option spread to a second option spread (that defines a combination of buy/sell indicators in paragraph 783". [Office action, page 6, ¶16].

However, the Office Action's analysis fails to show that each and every element of the pending independent claims is found in Lange. By way of example, the Office Action fails to show that any of steps (a) - (h) of claim 1 are disclosed by Lange.[1] The Office Action also fails to show that the individual process steps recited in independent claims 12 and 20 are disclosed by Lange. Furthermore, while the Office Action rejects independent claim 23 for being anticipated by Lange, it does not provide any basis for the rejection. This omission by the Office Action directly contravenes 37 C.F.R. §1.104, which requires that "the particular part [of a reference] relied on must be designated as nearly as practicable" and that the "[t]he examiner's action [should] be complete as to all matters". See 37 C.F.R. §§1.104(b) and (c)(2). For at least these reasons, the pending rejection under 35 U.S.C. §102(b) is improper and should be withdrawn.

Furthermore, notwithstanding the Office Action's assertions to the contrary, Lange does not disclose the presently claimed invention. Nowhere does Lange disclose "a method of determining a type of option spread" as recited in independent claims 1, 12, 20, and 23. Moreover, the Office Action's reliance on selected passages of Lange is unavailing, because the cited passages do not disclose the claimed invention. For instance, ¶[0797] of Lange, which was cited by the Office Action for purportedly "offering a digital option spread", does not disclose the claimed "method of determining a type of option spread" recited in Applicant's claims. Instead, ¶[0797] is concerned with the **trade** of digital option spreads:

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[1] The Office Action attempts to address step (h) of claim 1 by stating that Lange discloses "determining the type of option spread based on comparing a first option spread to a second option spread." However, as discussed below, the Office Action's analysis is based upon a mischaracterization of Lange and therefore fails to show that Lange discloses step (h) of claim 1.

> In a preferred embodiment, a **digital option spread trade** may be offered to investors which simultaneously execute a buy and a "sell" (in the synthetic or replicated sense of the term, as described below) of a digital call or put option. An investment in such a spread would have the same payout should the underlying outcome expire at any value between the lower and upper strike prices in the spread. If the spread covers one state, then the investment is comparable to an investment in a DBAR contingent claim for that one state. If the spread covers more than one constituent state, in a preferred embodiment the investment is allocated using the multistate investment method previously described so that, regardless of which state occurs among the states included in the spread trade, the investor receives the same payout. [Lange, ¶[0797]].

Similarly, the Office Action's reliance on ¶[0803] of Lange is misplaced. Even if ¶[0803] were to report that "option selling is common place and well known in the art", as the Office Action contends, such a disclosure would be beside the point and would not anticipate the claimed "method of determining a type of option spread" recited in Applicant's claims. A review of ¶[0803] confirms that it is limited to convention methods of buying and selling options, and does not disclose Applicant's claimed invention.

The Office Action's reliance on ¶[0783] of Lange is also misplaced. Paragraph [0783] of Lange reports that one may create a derivatives market to trade digital option spreads. According to Lange,

> [t]he methods and systems of the present invention can be used to create a derivatives market for digital options spreads. In other words, each investment in a state of a mutually exclusive and collectively exhaustive set of states of a group of DBAR contingent claims can be considered to correspond to either a digital call spread or a digital put spread. Since digital spreads can readily and accurately be used to replicate digital options, and since digital options are known, traded and processed in the existing markets, DBAR methods can therefore be represented effectively as a market for digital options--that is, a DBAR digital options market. [Lange, ¶[0783] (emphasis added)

However, the reference to the creation of derivatives markets for digital option spreads in this passage in Lange does not anticipate the claimed "method of determining a type of option spread" recited in Applicant's claims, because the passage does not disclose any of the steps recited in Applicant' independent claims.

For all of these reasons, Applicant respectfully maintains that Lange does not anticipate independent claims 1, 12, 20, and 23. For similar reasons, the corresponding dependent claims and newly added Beauregard and system claims are not anticipated by Lange. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the claim rejections under 35 U.S.C. §102(b).

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. <u>50-3732</u>, Order No. <u>16103-100001</u>.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. <u>50-3732</u>, Order No. <u>16103-100001</u>.

Respectfully submitted,
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Dated: April 23, 2009   By: /Joseph D. Eng Jr./
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